

Notice of Allowability

Application No.

09/662,399

Examiner

Blaine Basom

Applicant(s)

VEDULA ET AL.

Art Unit

2173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicants' amendments, received 8/3/2006.
2. ☒ The allowed claim(s) is/are 1-45.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicants' Attorney, Michael Medley, on October 27, 2006. The application has been amended as follows:

1. In claim 1, line 4, please add the phrase --stored on a computer-readable medium-- after the phrase, "computer-executable instructions".

2. In claim 19, line 3, please remove the word "the" before "DLL files".

3. Please replace claim 33 with the following:

--33. (Currently amended) In a mapping tool with a graphical user interface, a method of creating a function object for use in creating a mapping between a source object and a target object, the method comprising:

creating a script component having computer-executable instructions for performing a function using the user interface;

creating a graphical component associated with the function and having an input and an output, the input configured to be associated with at least one of a plurality of hierarchically displayed source object nodes of the source object, the source object nodes

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conforming to a first schema, and the output configured to be associated with at least one of a plurality of hierarchically displayed target object nodes of the target object, the target object nodes conforming to a second schema;

creating an interface component that provides the script component to a compiler in the mapping tool and provides the graphical component to the graphical user interface; and

associating the script component, the graphical component, and the interface component. --

4. In claim 41, line 8, please replace the word "hierarchical" with the phrase, --hierarchically displayed--, and in line 10, please also replace the word "hierarchical" with the phrase --hierarchically displayed--.

5. In claim 43, line 7, please replace the word "hierarchical" with the phrase, --hierarchically displayed--, and in line 9, please also replace the word "hierarchical" with the phrase --hierarchically displayed--.

6. In claim 44, line 4, please add the phrase --stored on a computer-readable medium-- after the phrase, "computer-executable instructions". In line 9, please replace the phrase "hierarchically arranged" with the phrase --hierarchically displayed--, and in line 11, please also replace the phrase "hierarchically arranged" with the phrase --hierarchically displayed--.

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7. Please replace claim 45 with the following:

--45. (Currently amended) A computer-readable medium having computer-executable instructions for performing the following steps:

creating a script component having computer-executable instructions for performing a function;

creating a graphical component associated with the function and having an input and an output, the input configured to be graphically associated with a source object node that is displayed amongst a plurality of hierarchically-arranged source object nodes conforming to a first schema, and the output configured to be graphically associated with a target object node that is displayed amongst plurality of hierarchically-arranged target object nodes conforming to a second schema;

creating an interface component that provides the script component to a compiler and provides the graphical component to a graphical user interface; and

associating the script component, the graphical component, and the interface component. --

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 16, 32-33, and 41-45, programming with function objects is well-known in the art. For example, the prior art (e.g. U.S. Patent No. 5,734,905 to Oppenheim) teaches function objects which comprise a script component having computer-executable instructions for performing a function, and a graphical component comprising an input and an output, wherein the graphical component is configured to allow a user to graphically associate the input with a source object and to graphically associate the output with a target object, so that the function object performs a mapping between the source and target objects. The prior art further teaches displaying the source and target objects hierarchically (see e.g. "The Macintosh Bible, 7th Edition," by Sharon Zardetto Aker), and teaches providing the function object an interface component having a globally unique identifier, whereby the interface component provides the script component to a compiler and the graphical component to a graphical user interface (see e.g. U.S. Patent No. 5,734,905 to Oppenheim, Microsoft's "Component Object Model Specification," etc.). In addition, mapping tools with a graphical user interface for creating a mapping between a source object and a target object, the source object comprising a plurality of nodes conforming to a first schema (e.g. a first document structure), and the target object having a plurality of nodes conforming to a second schema (e.g. a second document structure), are well-known in the art (see e.g. U.S. Patent No. 6,356,901 to MacLeod et al., U.S. Patent No. 5,708,828 to Coleman et al., and U.S. Patent No. 6,216,131 to Liu et al.). However, the prior art fails to teach or suggest utilizing function objects in such mapping tools, i.e. the prior art fail

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to teach graphically associating the input of the function object with one of a plurality of hierarchically-displayed source object nodes conforming to a first schema, and graphically associating the output of the function object with one of a plurality of hierarchically-displayed target object nodes conforming to a second schema, as is required by each of claims 1, 16, 32-33, and 41-45.

As claims 2-15 depend on claim 1, and include all of the limitations of claim 1, claims 2-15 are allowed for the reasons in which claim 1 is allowed. Similarly, claims 17-31 depend on claim 16 and include all of the limitations of claim 16, and therefore, claims 17-31 are allowed for the reasons in which claim 16 is allowed. Also, claims 34-40 are allowed for the reasons in which claim 33 is allowed, because claims 34-40 depend on claim 33, and include all of the limitations of claim 33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. The U.S. Patents of MacLeod et al., Coleman et al., and Liu et al. cited therein teach mapping tools for creating a mapping between a source object and a target object, the source object comprising a plurality of nodes conforming to a first schema (e.g. a first document structure), and the target object having a plurality of nodes conforming to a second schema (e.g. a second document structure).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571) 272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

btb
10/27/2006

TADESSE HAILU

Patent Examiner

